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TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			DANIEL JR, WILLIE J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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DETAILED ACTION

1. This action is in response to applicant's amendment filed on 11 March 2008. **Claims 1-3 and 5-32** are now pending in the present application and **claim 4** is canceled. This office action is made **Non-Final**.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 11 March 2008 has been entered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 8-10, 12-16, 18-20, 22, 24-26, 29-30, and 32 are rejected under 35

U.S.C. 102(b) as being anticipated by **Van De Berg** (hereinafter Berg) (US 5,907,812).

Regarding **claim 1**, Berg discloses a method of selecting a plurality of frequency bands for use in a desired wireless communication from among a plurality of frequency bands available to be used for the desired wireless communication (see abstract; col. 2, line 65 - col. 3, line 6; col. 3, lines 38-48; Figs. 2 & 4), where the radio communications system has carrier frequency bands, comprising:

passively monitoring (e.g., scanning) the plurality of frequency bands to determine interference information for each of the frequency bands (see abstract; col. 2, line 65 - col. 3, line 17; col. 3, lines 38-48; col. 4, lines 27-39; col. 7, lines 48-65; col. 9, lines 4-17; Figs. 2, 4, & 7-9);

summing the interference information of said each of the frequency bands to produce a signal quality indication (see col. 9, lines 4-44; Fig. 7 “ref. 2-6”), where the results of the scanning are combined to determine an interference-free frequency band of the carrier frequency bands; and

selecting the plurality of frequency bands for the desired wireless communication in response to the signal quality indication (see col. 3, lines -6, 11-17; col. 5, lines 8-12; col. 9, lines 9-30; Figs. 2, 4, & 7-9).

Regarding **claim 3**, Berg discloses the method of claim 1, wherein said passive monitoring (e.g., scanning) step includes monitoring interference associated with the plurality of frequency bands (see abstract; col. 3, lines 1-6, 11-17; col. 9, lines 6-8,57-62; col. 10, line 46-50; Figs. 7 “ref. 3”, 8 “ref. 13”, & 9 “ref. 24”).

Regarding **claim 5**, Berg discloses the method of claim 1, wherein said plurality of frequency bands are narrow frequency bands (e.g., C₂₋₆) comprising a wide frequency band (e.g., C¹) (see col. 7, line 48 - col. 8, line 6; col. 9, lines 4-30; Figs. 2 & 7 “ref. 2-6”).

Regarding **claim 8**, Berg discloses the method of claim 1, wherein said passive monitoring (e.g., scanning) step includes each of two wireless communication stations (e.g., 30, 34, 40) passively monitoring at least some of said plurality of frequency bands (see col. 2, line 65 - col. 3, line 7; col. 5, line 21 - col. 6, line 2; col. 14, lines 1-8; Figs. 10-13).

Regarding **claim 9**, Berg discloses the method of claim 8, including one of said wireless communication stations (e.g., 30, 34, 40) communicating with the other of said wireless communication stations (e.g., 30, 34, 40) regarding results of said passive monitoring (e.g., scanning) (see col. 5, line 21 - col. 6, line 2; col. 14, lines 1-8; Figs. 10-13).

Regarding **claim 10**, Berg discloses the method of claim 1, wherein said passive monitoring (e.g., scanning) step includes passively monitoring a group (e.g., plurality) of the available frequency bands, and tuning a filter to each of said group of available frequency bands (see abstract; col. 9, lines 3-21; col. 12, line 40 - col. 13, line 5; Figs. 2, 4, & 7-9), where the tuning a filter would be inherent in order to process each of the available bands a filter must be tuned to each available frequency band.

Regarding **claim 12**, Berg discloses the method of claim 1, wherein said selecting step includes the wireless communication station (e.g., 30, 34, 40) selecting the plurality of frequency bands for the desired wireless communication and informing another wireless communication station (e.g., 30, 34, 40) of the selected frequency bands (see col. 12, line 40 - col. 13, line 5; col. 14, lines 1-8).

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Regarding **claim 13**, Berg discloses a wireless communication station (e.g., 30, 34, 40) (see Figs. 11-13), comprising:

an antenna (e.g., 31, 35) for use in wireless communications (see col. 12, lines 3-7; col. 13, lines 42-48, 57-62; Figs. 11-13);

a band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) coupled to said antenna (e.g., 31, 35) for selecting a frequency band for use in a desired wireless communication from among a plurality of frequency bands available to be used for the desired wireless communication (see abstract; col. 2, line 65 - col. 3, line 6; col. 3, lines 38-48; col. 5, line 52 - col. 6, line 2; col. 6, lines 2-40; Figs. 2 & 4);

said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) operable for passively monitoring at least one of the available frequency bands to determine whether the at least one frequency band is acceptable for the desired wireless communication (see abstract; col. 2, line 65 - col. 3, line 6; col. 3, lines 38-48; col. 4, lines 27-39; col. 5, line 52 - col. 6, line 2; col. 6, lines 20-40; col. 7, lines 48-65; col. 9, lines 4-17; col. 12, lines 41-51; Figs. 2, 4, & 7-9);

said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) operable for selecting a first bandwidth (e.g., 1 MHz) for a first application and for selecting a second bandwidth (e.g., 5 MHz) different from the first bandwidth for a second application of the at least one of the available frequency bands (see col. 7, lines 19-32; col. 8, lines 50-56; col. 9, lines 1-30; Fig. 7), where the bandwidth of the at least one available frequency band is selected, if deemed acceptable, to form, by itself or in

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combination with other acceptable available frequency bands, the at least one frequency band for the desired communication; and

said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) further operable for selecting the at least one frequency band for the desired wireless communication if the at least one frequency band is determined to be acceptable (see abstract; col. 3, lines 1-6, 11-17; col. 5, lines 8-12; col. 5, line 52 - col. 6, line 2; col. 9, lines 9-30; col. 12, lines 41-60; Figs. 2, 4, 7-9, & 11-13).

Regarding **claim 14**, Berg discloses the wireless communication station of claim 13, wherein said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) includes an interference monitor (e.g., scanning means 52) for monitoring interference associated with the at least one frequency band (see col. 6, lines 30-40; col. 12, lines 4-60; Figs. 11-13).

Regarding **claim 15**, Berg discloses the wireless communication station of claim 14, wherein said interference monitor (e.g., scanning means 52) includes an RSSI measurement apparatus (see col. 6, lines 33-37), where the system has a scanning means (52) in which a RSSI measurement apparatus would be inherent to provide signal strength measurements as evidenced by the fact that one of ordinary skill in the art would clearly recognize.

Regarding **claim 16**, Berg discloses the wireless communication station of claim 13, including a wireless communications interface (e.g., transmitter & modulator 44 and receiver & demodulator 45) coupled between said antenna (e.g., 31, 35) and said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51), said wireless communications interface (e.g., transmitter & modulator 44 and receiver &

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demodulator 45) cooperable with said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) and said antenna (e.g., 31, 35) for communicating to another wireless communication station (e.g., 30, 34, 40) information indicative of a result of said passive monitoring (e.g., scanning) operation (see col. 5, line 21 - col. 6, line 2; col. 6, lines 20-39; col. 12, line 41 - col. 13, line 5; col. 14, lines 1-8; Figs. 11-13).

Regarding **claim 18**, Berg discloses the wireless communication station of claim 13, wherein said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) includes a filter coupled to said antenna (e.g., 31, 35) for tuning to each of a group of the available frequency bands, said band selection controller including a passive (e.g., scanning) monitor coupled to said filter for passively monitoring each of said group of available frequency bands (see abstract; col. 9, lines 3-21; col. 12, line 40 - col. 13, line 5; Figs. 2, 4, & 7-9), where the tuning a filter would be inherent in order to process each of the available bands a filter must be tuned to each available frequency band.

Regarding **claim 19**, Berg discloses the wireless communication station of claim 13, including a wireless communications interface (e.g., transmitter & modulator 44 and receiver & demodulator 45) coupled to said antenna (e.g., 31, 35) for interfacing between, said antennae and a communications application (e.g., cordless application), said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51) including a portion (e.g., scanning means 52) of said wireless communications interface (see col. 12, lines 41-60; Figs. 11-13).

Regarding **claim 20**, Berg discloses the wireless communication station of claim 19, wherein said portion (e.g., scanning means 52) of said wireless communications interface includes a filter for tuning to the at least one frequency band (i.e., in order to process the at least one frequency band a filter must be tuned to the frequency band) and an RSSI measurement apparatus coupled to said filter for providing an RSSI measurement with respect to the at least one frequency band (see col. 12, line 40 - col. 13, line 5; col. 6, lines 33-37).

Regarding **claim 22**, Berg discloses a method of selecting a frequency band for use in a desired wireless communication from among a plurality of frequency bands to be used for the desired wireless communication (see col. 2, line 65 - col. 3, line 6; col. 3, lines 38-48; Figs. 2 & 4), comprising:

selecting the frequency band (e.g., C_1) (see col. 9, lines 1-30; Figs. 2 & 7), where the bandwidth of the frequency band is selected to be scanned;

selecting a first bandwidth (e.g., 1 MHz) for a first application and selecting a second bandwidth (e.g., 5 MHz) different from the first bandwidth for a second application of the frequency band (see col. 7, lines 19-32; col. 8, lines 50-56; col. 9, lines 1-30; Fig. 7), where the bandwidth of the at least one available frequency band is selected, if deemed acceptable, to form, by itself or in combination with other acceptable available frequency bands, the at least one frequency band for the desired communication;

passively monitoring the frequency band to determine whether the frequency band is acceptable for the desired wireless communication (see abstract; col. 2, line 65 - col. 3, line

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17; col. 3, lines 38-48; col. 4, lines 27-39; col. 7, lines 48-65; col. 9, lines 4-17; Figs. 2, 4, & 7-9); and

selecting the frequency band for the desired wireless communication if the frequency band is determined to be acceptable by said passive monitoring (see abstract; col. 3, lines 1-6, 11-17; col. 5, lines 8-12; col. 9, lines 9-30; Figs. 2, 4, & 7-9).

Regarding **claim 24**, Berg discloses the method of claim 22, wherein said passive monitoring step includes monitoring interference associated with the frequency band (see abstract; col. 3, lines 1-6, 11-17; col. 9, lines 6-8, 57-62; col. 10, line 46-50; Figs. 7 “ref. 3”, 8 “ref. 13”, & 9 “ref. 24”).

Regarding **claim 25**, Berg discloses the method of claim 24, wherein said passive monitoring includes making a received signal strength indicator measurement with respect to the frequency band (see col. 4, lines 57-64; col. 10, line 66 - col. 11, line 3).

Regarding **claim 26**, Berg discloses the method of claim. 22, wherein said passive monitoring step includes passively monitoring (e.g., scanning) a plurality of narrow (e.g., carrier) frequency bands, and combining results of said passive monitoring (e.g., scanning) of said narrow (e.g., carrier) frequency bands to produce a wide band result corresponding to the frequency band (see col. 9, lines 4-30; Fig. 7 “ref. 2-6”).

Regarding **claim 29**, Berg discloses the method of claim 22, wherein said passive monitoring step includes each of two wireless communication stations (e.g., 30, 34, 40) passively monitoring (e.g., scanning) at least some of said plurality of available frequency bands (see col. 2, line 65 - col. 3, line 7; col. 5, line 21 - col. 6, line 2; col. 14, lines 1-8; Figs. 11-13).

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Regarding **claim 30**, Berg discloses the method of claim 29, including one of said wireless communication stations (e.g., 30, 34, 40) communicating with the other of said wireless communication stations (e.g., 30, 34, 40) regarding results of said passive monitoring (see col. 5, line 21 - col. 6, line 2; Figs. 11-13).

Regarding **claim 32**, Berg discloses the method of claim 22, wherein said passive monitoring step includes a wireless communication station (e.g., 30, 34, 40) passively monitoring a group (e.g., plurality) of frequency bands (see abstract; col. 4, lines 27-39; col. 6, lines 20-39; col. 9, lines 3-21; col. 12, line 40 - col. 13, line 5; Figs. 2, 4, & 7-9), and

said selecting step including the wireless communication station, selecting the frequency band for the desired wireless communication and informing another wireless communication station of the selected frequency band (see col. 12, line 40 - col. 13, line 5; col. 14, lines 1-8).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6-7, 21, 23, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van De Berg** (hereinafter Berg) (**US 5,907,812**) in view of Admitted prior art (**MPEP 2144.03**).

Regarding **claims 2 and 23**, Berg discloses every limitation claimed as applied above in claims 1 and 22. Berg fails to disclose the feature wherein said passive monitoring step includes monitoring communication quality associated with the plurality of frequency bands. However, the examiner takes official notice of the fact that it was notoriously well known in the art to the feature wherein said passive monitoring step includes monitoring communication quality associated with the plurality of frequency bands.

As a note, one of ordinary skill in the art would clearly recognize the common knowledge of having the feature wherein said passive monitoring step includes monitoring communication quality associated with the plurality of frequency bands in order to determine whether or not said frequency band is acceptable for a desired communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Berg by specifically having the feature wherein said passive monitoring step includes monitoring communication quality associated with the plurality of frequency bands, for the purpose of determining if said at least one available frequency band is acceptable for a desired communication as known in the prior art. Such feature provides an additional parameter to be used for selecting an available frequency band in Berg's invention in accordance with the desired communications.

Regarding **claims 6 and 27**, Berg discloses every limitation claimed as applied above in claims 5 and 22. Berg further discloses that his invention can be applied to several different technologies operating on the same geographical area and using the same frequency band (see col. 1, lines 57-63). Berg fails to disclose the feature wherein the wide frequency band is an IEEE 802.11b band. However, the examiner takes official notice of the fact that it

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was notoriously well known in the art to the feature wherein the wide frequency band is an IEEE 802.11b band.

As a note, one of ordinary skill in the art would clearly recognize the common knowledge of having the feature wherein the wide frequency band is an IEEE 802.11b band are well known standard in which wireless communication stations operate and communicate within the frequency band (i.e., 2.4 GHZ).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Berg by specifically having the feature wherein the wide frequency band is an IEEE 802.11b band, for the purpose of avoiding interference and management of the frequency band can be efficiently accomplished between the wireless communication stations.

Regarding **claims 7 and 28**, Berg discloses every limitation claimed as applied above in claims 1 and 22. Berg further discloses that his invention can be applied to several different technologies operating on the same geographical area and using the same frequency band (see col. 1, lines 57-63). Berg fails to disclose the feature wherein at least one frequency band of the plurality of frequency bands is a Bluetooth 2.0 band. However, the examiner takes official notice of the fact that it was notoriously well known in the art to the feature wherein at least one frequency band of the plurality of frequency bands is a Bluetooth 2.0 band.

As a note, one of ordinary skill in the art would clearly recognize the common knowledge of having the feature wherein at least one frequency band of the plurality of

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frequency bands is a Bluetooth 2.0 band are well known standard in which wireless communication stations operate and communicate within the frequency band (i.e., 2.4 GHZ).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Berg by specifically having the feature wherein at least one frequency band of the plurality of frequency bands is a Bluetooth 2.0 band, for the purpose of avoiding interference and management of the frequency band can be efficiently accomplished between the wireless communication stations.

Regarding **claim 21**, the claims according to claim 13 is rejected for the same reasons as set forth above in the rejection of claims 6 and 7.

Claims 11 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van De Berg** (hereinafter Berg) (US 5,907,812) in view of **West** (US 5,574,979).

Regarding **claims 11 and 31**, Berg discloses every limitation claimed as applied above in claims 1 and 22. Berg does not specifically disclose having the feature(s) wherein the plurality of frequency bands includes a frequency band associated with microwave oven interference. However, the examiner maintains that the feature(s) wherein the plurality of frequency bands includes a frequency band associated with microwave oven interference was well known in the art, as taught by West.

In the same field of endeavor, West discloses the feature(s) wherein the plurality of frequency bands includes a frequency band associated with microwave oven interference

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(4501) (see col. 3, line 64 - col. 4, line 23; col. 5, line 62 - col. 6, line 6; col. 61, lines 15-42; Fig. 45), where the system detects interference from associated with a microwave oven.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berg and West to have the feature(s) wherein the plurality of frequency bands includes a frequency band associated with microwave oven interference, in order to provide a radio frequency communication system that detects interference and determines whether such interference is periodic, as taught by West (see col. 4, lines 11-13).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van De Berg** (hereinafter Berg) (US 5,907,812) in view of **Souissi et al.** (hereinafter Souissi) (US 6,327,300 B1).

Regarding **claim 17**, Berg discloses wireless communication station of claim 13, including a wireless communications interface (e.g., transmitter & modulator 44 and receiver & demodulator 45) coupled between said antenna (e.g., 31, 35) and said band selection controller (e.g., combination of scanning means 52 and central control and application logic 51), said wireless communications interface cooperable with said antenna for receiving and providing to said band selection controller a passive monitoring (e.g., scanning) result which is associated with the at least one frequency band and which has been obtained and transmitted by another wireless communication station (e.g., 30, 34, 40) (see col. 5, line 21 - col. 6, line 2; col. 6, lines 20-39; col. 12, line 41 - col. 13, line 5; col. 14, lines 1-8; Figs. 11-13), . Berg does not specifically disclose having the feature(s) said band selection controller

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operable for determining whether the at least one frequency band is acceptable for the desired wireless communication in response to said result received from said another wireless communication station. However, the examiner maintains that the feature(s) said band selection controller operable for determining whether the at least one frequency band is acceptable for the desired wireless communication in response to said result received from said another wireless communication station was well known in the art, as taught by Souissi.

In the same field of endeavor, Souissi discloses the feature(s) said band selection controller (e.g., processor or controller 12) operable for determining whether the at least one frequency band is acceptable for the desired wireless communication in response to said result received from said another wireless communication station (e.g., second transceiver station) (see col. 2, lines 22-35,60-65; col. 3, line 20 - col. 4, line 3; Figs. 1-2), where transceiver (10) includes processor (12) that receives a communication request from a second transceiver device on a dynamically selected portion of the spectrum selected.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berg and Souissi to have the feature(s) said band selection controller operable for determining whether the at least one frequency band is acceptable for the desired wireless communication in response to said result received from said another wireless communication station, in order to significantly enhance the dynamic selection of the frequency band to be used in the desired communication by, for example, accounting for unknown interferers to one of the transceiver devices during the selection process, as taught by Souissi (see col. 3, lines 37-44).

Response to Arguments

5. Applicant's arguments with respect to claims 1-3 and 5-32 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amended language and/or new limitations.

In response to applicant's arguments, the Examiner respectfully disagrees as the applied reference(s) provide more than adequate support and to further clarify (see the above claims for relevant citations).

6. Regarding claims 2, 6-7, 21, 23, and 27-28, the applicant did not traverse the Examiner's assertion of official notice stated in the action(s) mailed 28 November 2005 and 03 November 2004. As a result, the Examiner's statement is hereby taken to be well-known admitted prior art or common knowledge because the applicant failed to traverse the Examiner's assertion of official notice. Therefore, the applicant must agree with the Examiner's assertion of official notice.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIE J. DANIEL JR whose telephone number is (571)272-7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WJD,Jr/

WJD,Jr
08 June 2008

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617